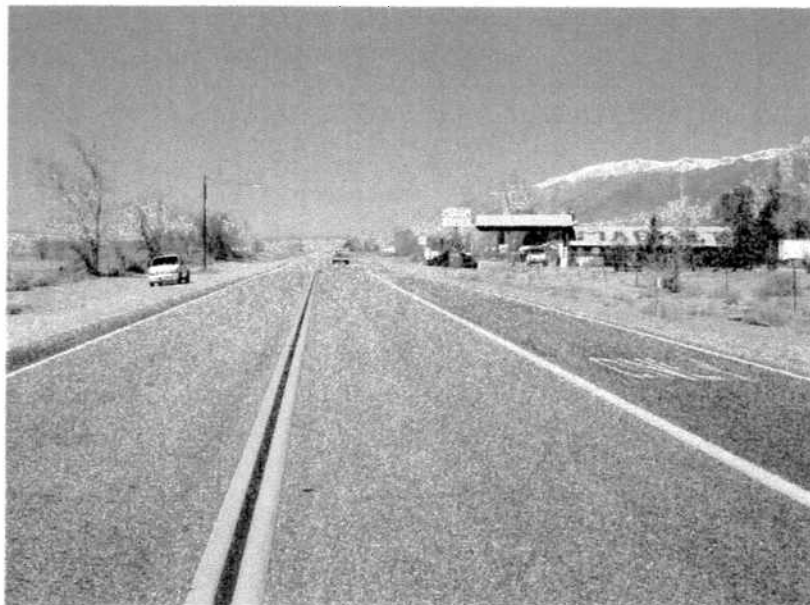


# TRAFFIC/CIRCULATION ANALYSIS

## BROWN/WHITE MOUNTAIN ESTATES PROJECTS



LSA

March 24, 2004

# TRAFFIC/CIRCULATION ANALYSIS

## BROWN/WHITE MOUNTAIN ESTATES PROJECTS

### MONO COUNTY

Submitted to:

Diversified Pacific Development Corporation  
10621 Civic Center Drive  
Rancho Cucamonga, California 91730  
(909) 481-1150

Prepared by:

LSA Associates, Inc.  
20 Executive Park, Suite 200  
Irvine, California 92614-4731  
(949) 553-0666

LSA Project No. DFD430

# LSA

March 31, 2004

## INTRODUCTION

### Statement of Purpose

The purpose of this analysis is to identify the potential circulation impacts associated with the development of 48 single-family dwelling units and 2.22 acres of highway commercial development on the Brown property and 57 single-family dwelling units within two phases of the proposed White Mountain Estates project (The Estates). Traffic has been generated for the two projects based on surveys of similar uses and standard traffic engineering trip rates and has been added to an existing traffic base, a short-range 2009 traffic base and a long range 2025 traffic base. Levels of service at the project access roads intersecting Highway 6 are provided for each scenario. Operational and geometric analyses are also provided for the project interface with Highway 6. This study has been prepared using the Caltrans "Minimum Contents of Traffic Impact Study Report" as a guideline.

### Project Description

Figure 1 illustrates the project location. Both projects are located in rural Mono County adjacent to Highway 6.

Figure 2 illustrates the Brown project site plan. The Brown project is located at the northwest corner of Highway 6/Chalfant Road. The project includes 48 single-family residential lots, each of approximately 0.43 acre, and a 2.22-acre commercial site (assumed to be 14,000 square feet of highway commercial/retail use). The site is currently vacant. Primary access to the project is via Chalfant Road, which meets Highway 6 at a stop controlled, three-legged intersection. All movements are permitted at this location. A secondary access is also planned approximately 1,500 feet north of Chalfant Road.

An alternative circulation plan is also evaluated that adds a third access to Highway 6, aligning with the existing Brown Subdivision Road east of Highway 6.

Figure 3 presents the White Mountain Estates project site plan. The Estates project is located toward the eastern end of White Mountain Estates Road. The project is planned in two phases. The first phase includes 39 single-family residential lots ranging from 0.50 to 0.96 acre. This project is adjacent to the existing White Mountain Estates subdivision. The second phase includes 18 larger single-family residential lots. Both parcels are currently vacant. Access is provided via White Mountain Estates Road, which meets Highway 6 at a stop controlled three-legged intersection.

## TRAFFIC ANALYSIS

### Existing Setting

Highway 6 is the primary regional roadway in the project vicinity. Highway 6 is a two-lane conventional highway with a functional description of Minor Arterial, as indicated in the Route Concept Report (RCR).<sup>1</sup> The travel way is 24 feet for the entire length of Highway 6. It serves as part of a major corridor for the movement of goods between the West and East Coasts. As such, it is a major trucking route with a truck mix of 20–30 percent.

---

<sup>1</sup> California Department of Transportation, District 9, Route Concept Report—Route 6, March 1991, page 2.

Due to the high truck volume and high speeds along Highway 6 in the project vicinity, Caltrans and Mono County have entered into a Capital Project Charter (Chalfant Safety Improvements) to address traffic speeds and turning conflicts that cause safety concerns in the Chalfant area. A copy of the draft work in progress is attached.

Existing annual average daily traffic (AADT) volume along Highway 6 has been taken from the most recent Caltrans traffic counts. In addition, LSA had existing a.m. and p.m. peak hour turn movement volumes collected on Highway 6 at Brown Subdivision Road and at Chalfant Road. The counts at Highway 6/Chalfant Road are used for the project impact assessment, as well as to establish a trip rate for residential uses, existing and planned. Figure 4 presents the existing traffic volumes in the project vicinity.

### **Short-Range Horizon (2009)**

Short-range horizon (2009) traffic volumes were estimated through the application of a growth rate to the existing traffic volumes. A three percent annual growth rate, compounded for five years, has been applied to existing through volumes along Highway 6 to arrive at the short-range (2009) traffic base.<sup>1</sup> Additionally, peak-hour turn movement volumes have been assigned to Highway 6/Chalfant Road to account for the reasonably foreseeable development of an additional 59 residential lots off Chalfant Road west of Highway 6. Figure 4 illustrates the short-range horizon (2009) traffic volume forecasts.

### **Long-Range Horizon (2025)**

Long-range horizon (2025) traffic volumes were estimated through the application of a growth rate to the existing traffic volumes. A three percent annual growth rate, compounded for 21 years, has been applied to existing through volumes along Highway 6 to arrive at the long-range (2025) traffic base. The additional 59 residential lots off Chalfant Road west of Highway 6 are also reflected in the long-range (2025) traffic base. Figure 4 illustrates the long-range horizon (2025) traffic volume forecasts.

### **Project Trip Generation**

Project trip generation is presented in Table A. LSA reviewed sources for standard residential and retail trip rates, such as the Institute of Transportation Engineers (ITE), *Trip Generation*, Seventh Edition. The standard residential trip rate structure of 10.00 trips per day per unit and associated peak-hour rates are based on surveys of urban and suburban areas that have more robust land development to provide the attractions sought by residents (i.e., shopping, leisure, entertainment). Instead of using these standard trip rates, and overestimating the potential trip making of the Brown and the Estates projects, LSA collected traffic counts at Highway 6/Chalfant Road and developed trip rates based on the existing 41 residential units in the area. Based on the peak-hour traffic counts in and out of Chalfant Road at Highway 6 (illustrated in Figure 4), peak-hour rates included in Table A were developed. The peak-hour residential rates are roughly 65 percent of the standard residential trip rates included in the ITE source. The daily residential rate is estimated based on a 10 to 1 factor of daily to p.m. peak-hour trip making for single-family units. Residential trip generation is presented for both the Brown property and the White Mountain Estates projects.

---

<sup>1</sup> Ibid, Page 22.

Retail trip rates originate from the ITE *Trip Generation*, Seventh Edition, for shopping center (Land Use Code 820). However, similar to the residential use, the retail attraction does not have a large population to draw from to result in robust trip generation. Therefore, the ITE retail rates were adjusted by 65 percent to reflect the same relation of observed to ITE-estimated rates for residential. Additionally, much of the retail traffic will be attracted from Highway 6 as pass-by traffic, a retail trip purpose satisfied at this site on a much longer trip destination. Based on surveys included in the ITE *Trip Generation Handbook*, pass-by percentage is estimated at 55 percent of the gross trip generation. These trips are already on Highway 6, but will leave the through movement and turn into the site. Once satisfied, they will get back onto Highway 6 and their ultimate destination. These pass-by trips are removed from the appropriate through movement and added to the respective turn movement into/out of the site. The total gross trip generation (new trips and pass-by trips) is accounted for at the driveway at Chalfant Road.

### Project Trip Distribution and Assignment

Project trips have been assigned to the local intersections and Highway 6 based on a trip distribution reflecting 85 percent origin/destination to the south and 15 percent origin/destination to the north. These directional splits are derived from the traffic counts collected at Highway 6/Chalfant Road. The Brown property trip generation (residential and retail) has been assigned in and out at the Chalfant intersection, while the White Mountain Estates project traffic has been assigned in and out at the White Mountain Estates Road intersection. Figure 4 illustrates existing short-range and long-range traffic bases with the project trip assignment added.

### Level of Service Analysis

Levels of service have been determined for the six horizons included in this analysis: existing, short range, and long range without and with projects. The Highway Capacity Manual (HCM) Unsignalized Intersection method has been used to determine the level of service. The HCS2000 Version 4.1d software has been used. The Table below presents the results.

Intersections	Existing				Year 2009				Year 2025			
	AM		PM		AM		PM		AM		PM	
	Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS
Highway 6/Chalfant Rd.												
Without Project	8.9	A	9.0	A	9.2	A	9.0	A	9.7	A	9.3	A
With Project	9.2	A	9.7	A	9.5	A	10.0	B	10.0	B	10.5	B
Highway 6/White Mountain												
Without Project	9.5	A	9.2	A	9.9	A	9.5	A	10.6	B	10.0	B
With Project	10.0	B	9.8	A	10.5	B	10.1	B	11.4	B	10.7	B

Both intersections will operate at excellent levels of service in all horizons without and with the projects. Therefore, no circulation impacts related to traffic volume, congestion, and level of service are forecast as a result of Brown property and White Mountain Estates project development.

## Special Issues

**Turn Lane Geometrics.** While levels of service are forecast to remain good with the development of the two projects, operational and geometric issues are evaluated given the existing setting and traffic characteristics. As noted above, Highway 6, is a predominant truck route for the movement of intercontinental goods. Highway 6 carries an average of 20–30 percent trucks in the vehicle mix on any given day. The roadway is flat with few lateral obstructions to slow traffic. As noted in the RCR, the daily traffic volumes, including the trucks, travel at high speeds along Highway 6. As mentioned previously, the County and Caltrans have acknowledged the traffic speed and safety issues associated with turning conflicts through the preparation of a Capital Project Charter for the community of Chalfant.

The development of the projects will increase the demand for turn movements along Highway 6 in Chalfant. At the Chalfant Road intersection with Highway 6, the Brown properties project will increase the northbound left-turn demand by 65 vehicles per hour in the p.m. peak hour. Similarly, the White Mountain Estates development will increase the northbound right-turn demand by 25 vehicles per hour in the p.m. peak hour, a 53 percent increase in that particular movement. The increase in turn movement volume has the potential to increase the safety concerns at these intersections. Therefore, as a mitigation measure to address turn volume increases and potential safety concerns, turn lane channelization is recommended prior to the use and occupancy of the Brown and White Mountain Estates projects.

At the intersection of Highway 6/Chalfant Road, the Brown property project should install a northbound left-turn lane according to design requirements of Caltrans and the County. The left-turn lane may include a 280-foot left-turn pocket length and a 120-bay taper. A proper transition on Highway 6 on the north side of Chalfant Road shall also be constructed according to Caltrans design requirements.

At the intersection of Highway 6/White Mountain Estates Road, the White Mountain Estates project shall install a northbound right-turn lane according to design requirements of Caltrans and the County. The right-turn lane may include a 250-foot turn pocket length and a 120-bay taper. No additional transitions on Highway 6 appear to be required.

Turn movements at the northerly access to the Brown property project and the southbound right turns at the Chalfant Road intersection, as well as southbound left turns at the White Mountain Estates access, are relatively low, and dedicated lanes are not recommended.

**Alternative Site Plan.** An alternative site plan has been suggested for the Brown property project that would include a third access to Highway 6 aligning directly with Brown Subdivision Road to the north of Chalfant Road. This alternative was suggested to align the primary access of the Brown property project with an existing intersection to create a conventional four-way stop-controlled location. This alternative site plan did not, however, eliminate an access from any other location. Therefore, the alternative site plan considers three access points onto Highway 6, one greater than the two proposed for the planned project.

This alternative site plan is an inferior design for the following reasons:

1. The volume of traffic generated by the Brown property project does not warrant a third point of ingress/egress
2. The existing Chalfant Road intersection will operate with excellent levels of service with the addition of the project in short- and long-range horizons.
3. A single primary access at Chalfant Road can be designed with left-turn channelization to reduce safety concerns along Highway 6 while maintaining excellent levels of service.
4. The distance between Brown Subdivision Road and Chalfant Road is approximately 480 feet, less than desirable to implement a left-turn lane into the site from the Brown Subdivision Road.
5. The third access would cut the commercial parcel in two, compromising its potential use.

Therefore, the alternative site plan has been dropped with no further analysis. The proposed Brown property project site plan with two accesses can be developed with certain circulation improvements and maintain and enhance local traffic flow and safety.

## CONCLUSIONS AND RECOMMENDATIONS

Based on the findings of this study, the proposed Brown property and White Mountain Estates projects can be developed without adversely impacting the levels of service along Highway 6, or at the intersections of Highway 6/Chalfant Road and Highway 6/White Mountain Estates Road. No circulation improvements are needed or recommended to maintain satisfactory levels of service.

The introduction of addition peak-hour turn movements onto and off of Highway 6 at the two study area intersections will increase conflicting movements with through traffic along Highway 6. The safety issues associated with turn movements along Highway 6 in the Chalfant area are the subject of a Capital Project Charter between Caltrans and the County. In order to diminish the potential safety issues associated with increased turn movements on Highway 6, the following improvements are recommended:

**Highway 6/Chalfant Road**—The Brown property project applicant shall construct a northbound left-turn lane from Highway 6 into Chalfant Road according to design requirements of Caltrans and the County. The left-turn lane may include a 280-foot left-turn pocket length and a 120-bay taper. A proper transition on Highway 6 on the north side of Chalfant Road shall also be constructed according to Caltrans design requirements.

**Highway 6/White Mountain Estates Road**—The White Mountain Estates project shall install a northbound right-turn lane according to design requirements of Caltrans and the County. The right-turn lane may include a 250-foot turn pocket length and a 120-bay taper. No additional transitions on Highway 6 appear to be required.

With these improvements, potential circulation impacts will be reduced to a level of insignificance.

Attachments





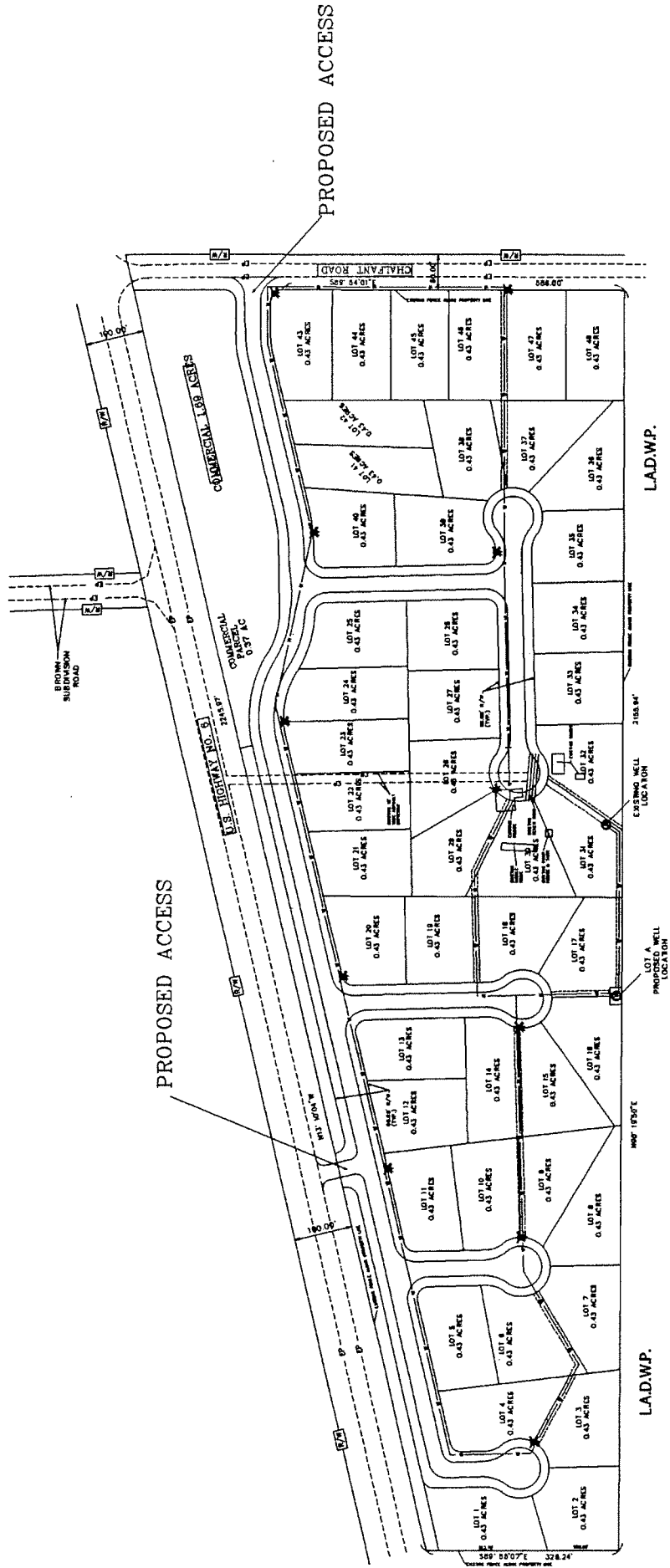
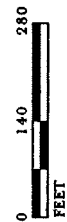
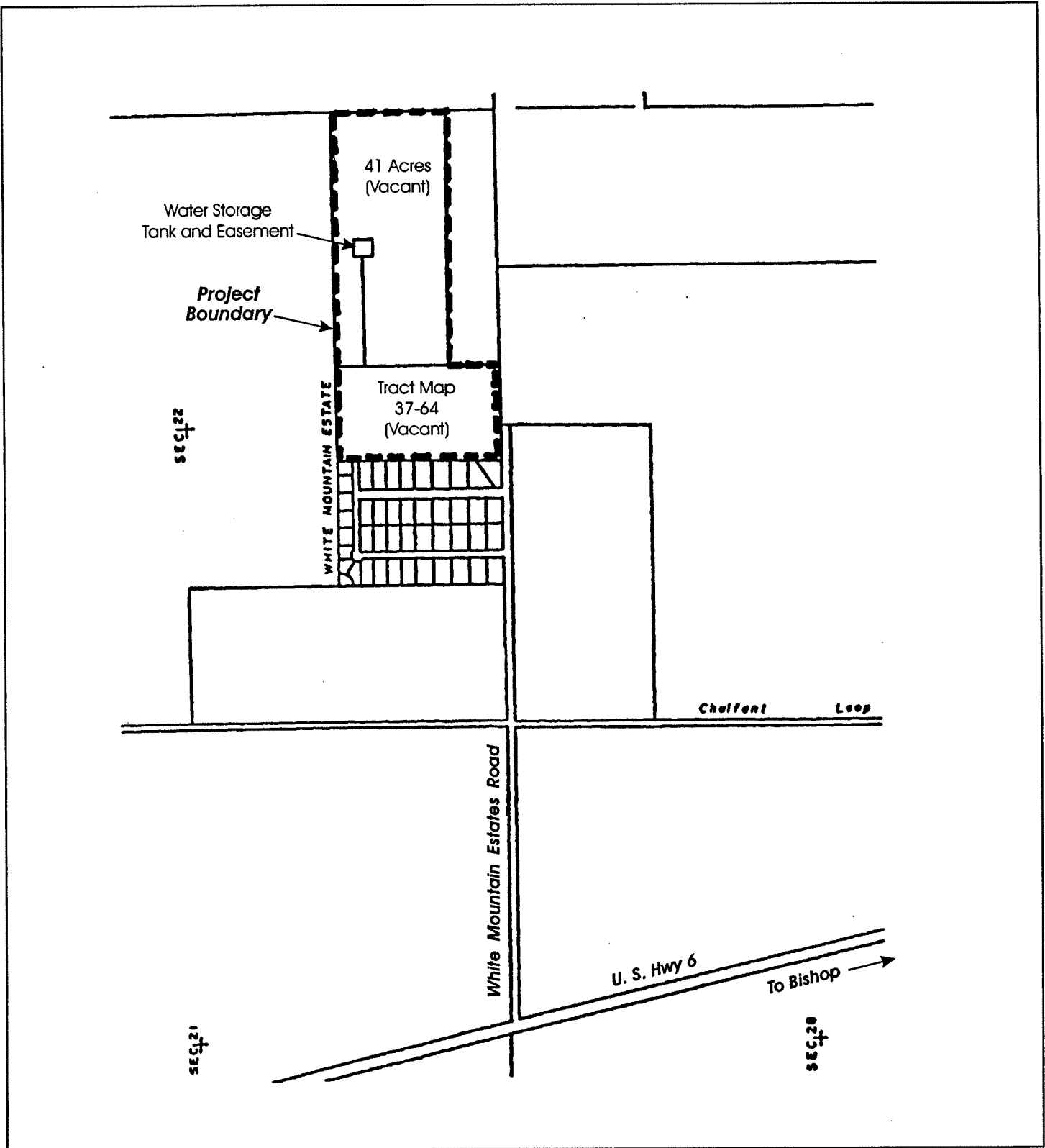


FIGURE 2

LSA



Highway 6  
Brown Property Site Plan



LSA

FIGURE 3

Highway 6  
White Mountain Estates Site Plan

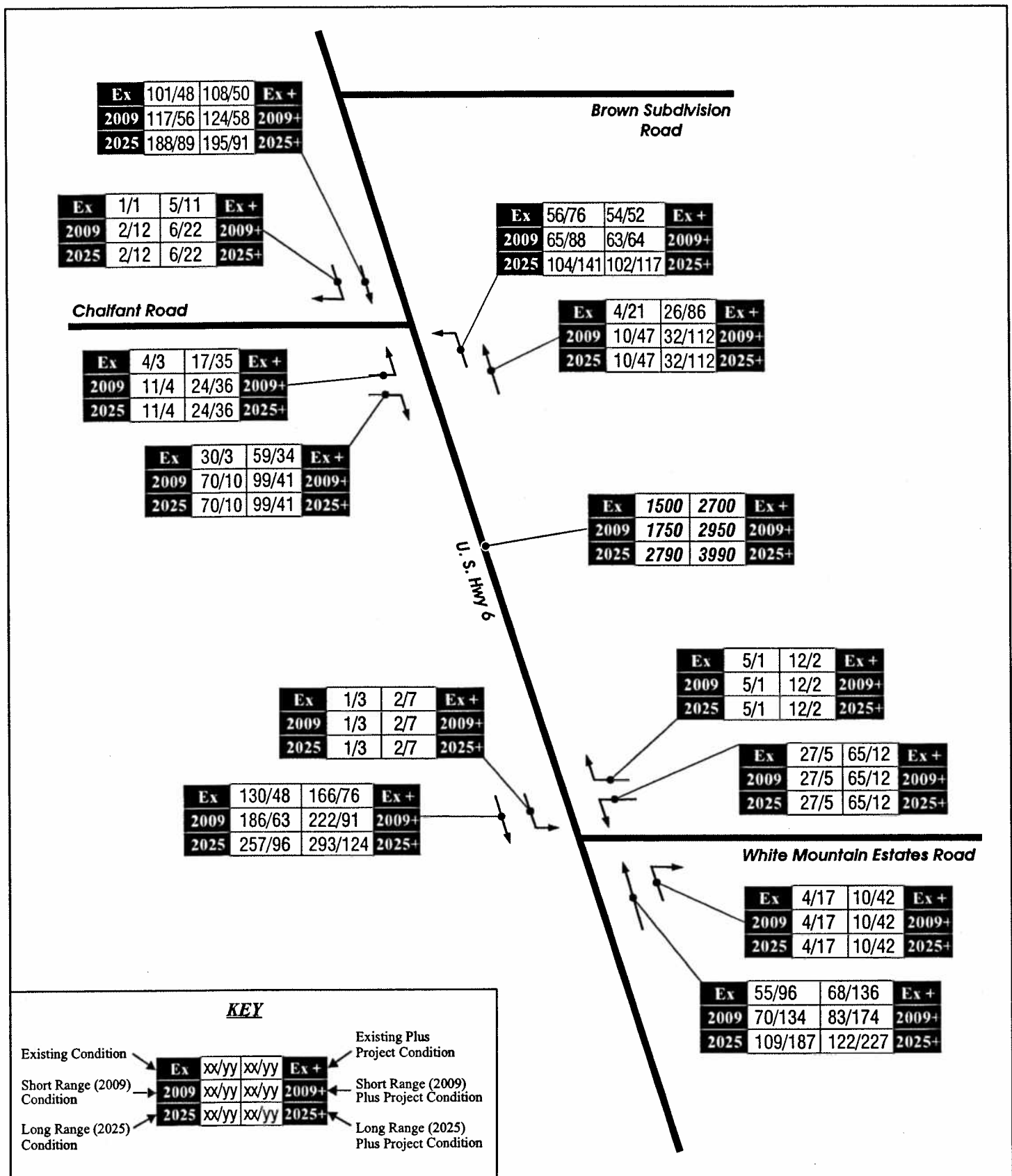


FIGURE 4

LSA



SCHMATIC - NOT TO SCALE

Highway 6  
Brown Property/White Mountain Estates  
AM/PM Peak Hour Traffic Volumes

Table A - Brown Property/White Mountain Estates Trip Generation Summary

Land Use	Size	Units	ADT	AM Peak Hour			PM Peak Hour		
				In	Out	Total	In	Out	Total
<b>Trip Rates</b>									
Low Density Residential <sup>1</sup>		DU	6.50	0.12	0.79	0.91	0.51	0.14	0.65
Neighborhood Commercial <sup>2</sup>		TSF	87.84	1.36	0.87	2.24	3.81	4.13	7.94
<b>Trip Generation</b>									
Low Density Residential	48	DU	312	6	38	44	24	7	31
Brown Property	57	DU	371	7	45	52	29	8	37
White Mountain Estates									
Neighborhood Commercial	14	TSF	1,230	19	12	31	53	58	111
Pass-By Percentage (55%) <sup>3</sup>			676	11	7	17	29	32	61
Net New Trips			553	9	5	14	24	26	50

<sup>1</sup> Peak hour directional trip rates based on surveys at Highway 6/Chalfant Road. Daily rate is 10 times the p.m. peak hour rate.

<sup>2</sup> Rates are based on 65 percent of ITE Shopping Center rate for 14,000 square foot use.

<sup>3</sup> Pass by percentage is from the ITE *Trip Generation Handbook*, 5th Ed., page 62. It is the average of the sample of sites less than 50,000 sq. ft.

Project Name: Chalfant Safety Improvements  
 County-Route-P.M.: Mno-6-5.4/7.7  
 District-Project EA: 09-32000k

Project Phase: PID  
 Prepared by: Brad Mettam  
 Date Prepared: 12/29/03

The purpose of a charter is to reach agreement between the Sponsor and the Project Manager by clearly stating the objectives of the project at the beginning of each phase

## Charter Purpose:

Provide the specific purpose of this charter.

This project charter documents the agreement between the Mono County Local Transportation Commission (LTC) and the Project Manager over key elements of this project.

## Background:

Provide the history of the project to date.

Added: This project should be consistent w/ The Department's guidelines & directives on the use of context sensitive solutions.

Commission vote 2/9/04

This project was initiated to address traffic speeds and turning conflicts that cause safety concerns.

The existing facility is a 60mph two-lane state highway without turn pockets in a developing community area (originally rural residential area).

High percentage of the through traffic volume consists of trucks. Truck and vehicle movements cause conflict and safety concerns. In winter, if chain controls go up on Hwy 395, trucks traffic increases on Hwy 6 (Hwy 6 to US 95 in Nevada).

*design for the speed you want*

## Project Purpose:

What is the purpose of the project? What was the project selection criterion?

For revisions after the PID phase this should be quoted or referenced from the PID's purpose and need.

This project is intended to provide highway improvements to reduce turning conflicts in the community of Chalfant.

## Project Phase Objectives:

What are the project objectives (cost, schedule, quality, & customer satisfaction) that will determine the success of the project.

This project is intended to provide a programmable document by June 30, 2005 that provides alternatives that have been developed with public and external sponsor input. This PID is to be delivered, complete with workplan, utilizing no more than .4 PYs of effort.

## Project Description/Scope Statement:

Provide a brief description of the project and the end product the project will construct.

Provide a location map of the project.

Recent and planned residential developments will require coordination and potential phasing of improvements, with developer's funding to mitigate their impacts.

This project should consider the construction of appropriate turning facilities, separation, center turn lanes, and frontage roads or access control.

## Project/Phase Constraints, Assumptions, and Risks:

Provide a list of constraints, assumptions, and risks for the project and current phase. Actual analysis of risks is done in a separate process.

Constraints are items that limit a project team's options such as schedules, resources, budget, and technology.

Assumptions are those considerations that

### Constraints:

There is a management constraint to have the PID complete by 6-30-05.

Possible acquisition of R/W, wetlands, endangered species, historical/archaeological and scenic issues community support.

### Assumptions:

Dates committed to by team members will be met.

Project Name: Chalfant Safety Improvements  
 County-Route-P.M.: Mno-6-5.4/7.7  
 District-Project EA: 09-32000k

Project Phase: PID  
 Prepared by: Brad Mettam  
 Date Prepared: 12/29/03

are considered true, certain, or real for planning purposes.

Risks are discrete occurrences that may affect the project for better or worse.

**Risks:**

This study needs to retain external sponsor support to be successful.

**Phase Deliverables:**

Provide a list of the deliverables for the current project phase. These should be the significant deliverables that the sponsor will be asked to verify. Include the Project Management deliverables such as workplan, status reports, etc.

- PSR
- Project schedule
- Project resource estimate

**Key Team Members:**

List the key team members needed for the project. Identify which are critical to the current phase. They need not be named, but all key functional units and any special expertise required should be listed.

Brad Mettam – PM

Design, Planning, Environmental, Landscape Architecture, Maintenance, R/W, Surveys, Construction.

– Mono County

Katy Walton - Planning

Jay Haghparast - Design

Dave Grah – Maintenance and Ops.

Jerry Gabriel – Traffic Operations

**Deliverable Management:**

*(Filling out Deliverable Management is Optional)*

Describe the process the project team will take to manage the phase deliverables. Identify any specific sponsor reviews/approvals that will be required.

**Approvals:**

Project Manager: \_\_\_\_\_

Brad Mettam  
 Program/Project Management

Date: \_\_\_\_\_

\*Project Sponsor: \_\_\_\_\_

John Cecil  
 Mono County LTC Chair

Date: \_\_\_\_\_

\* Project Sponsors are individuals or groups that represent external project customers by advocating a project or group of projects. Project Sponsors may be internal or external to Caltrans. (ref: PMD 99-01 *Project Management Definitions*)

## TWO-WAY STOP CONTROL SUMMARY

General Information		Site Information	
Analyst	Kellyjean Tandoc	Intersection	Highway 6/Chalfant Rd
Agency/Co.	LSA Associates, Inc.	Jurisdiction	
Date Performed	3/26/04	Analysis Year	Existing
Analysis Time Period	AM Peak Hour		
Project Description Highway 6			
East/West Street: Chalfant Rd		North/South Street: Chalfant	
Intersection Orientation: North-South		Study Period (hrs): 0.25	

## Vehicle Volumes and Adjustments

Major Street	Northbound			Southbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume	4	56	0	0	101	1
Peak-Hour Factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Hourly Flow Rate, HFR	4	56	0	0	101	1
Percent Heavy Vehicles	0	--	--	0	--	--
Median Type	Undivided					
RT Channelized			0			0
Lanes	0	1	0	0	1	0
Configuration	LT					TR
Upstream Signal		0			0	
Minor Street	Westbound			Eastbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume		0		4	0	30
Peak-Hour Factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Hourly Flow Rate, HFR	0	0	0	4	0	30
Percent Heavy Vehicles	0	0	0	0	0	0
Percent Grade (%)	0			0		
Flared Approach		N			N	
Storage		0			0	
RT Channelized			0			0
Lanes	0	0	0	1	0	1
Configuration				L		R

## Delay, Queue Length, and Level of Service

Approach	NB	SB	Westbound			Eastbound		
Movement	1	4	7	8	9	10	11	12
Lane Configuration	LT					L		R
v (vph)	4					4		30
C (m) (vph)	1503					827		959
v/c	0.00					0.00		0.03
95% queue length	0.01					0.01		0.10
Control Delay	7.4					9.4		8.9
LOS	A					A		A
Approach Delay	--	--				8.9		
Approach LOS	--	--				A		

Rights Reserved

HCS2000™

Version 4.1d

Copyright © 2003 University of Florida, All Rights Reserved

Version 4.1d

## TWO-WAY STOP CONTROL SUMMARY

General Information		Site Information	
Analyst	Kellyjean Tandoc	Intersection	Highway 6/Chalfant Rd
Agency/Co.	LSA Associates, Inc.	Jurisdiction	
Date Performed	3/26/04	Analysis Year	Existing
Analysis Time Period	PM Peak Hour		
Project Description Highway 6 Project			
East/West Street: Chalfant Rd		North/South Street: Highway 6	
Intersection Orientation: North-South		Study Period (hrs): 0.25	

### Vehicle Volumes and Adjustments

Major Street	Northbound			Southbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume	21	76	0	0	48	1
Peak-Hour Factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Hourly Flow Rate, HFR	21	76	0	0	48	1
Percent Heavy Vehicles	0	--	--	0	--	--
Median Type	Undivided					
RT Channelized			0			0
Lanes	0	1	0	0	1	0
Configuration	LT					TR
Upstream Signal		0			0	

Minor Street	Westbound			Eastbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume	0	0	0	3	0	3
Peak-Hour Factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Hourly Flow Rate, HFR	0	0	0	3	0	3
Percent Heavy Vehicles	0	0	0	0	0	0
Percent Grade (%)	0			0		
Flared Approach		N			N	
Storage		0			0	
RT Channelized			0			0
Lanes	0	0	0	1	0	1
Configuration				L		R

### Delay, Queue Length, and Level of Service

Approach	NB	SB	Westbound			Eastbound		
Movement	1	4	7	8	9	10	11	12
Lane Configuration	LT					L		R
v (vph)	21					3		3
C (m) (vph)	1571					818		1027
v/c	0.01					0.00		0.00
95% queue length	0.04					0.01		0.01
Control Delay	7.3					9.4		8.5
LOS	A					A		A
Approach Delay	--	--				9.0		
Approach LOS	--	--				A		

Rights Reserved

HCS2000™

Version 4.1d

Copyright © 2003 University of Florida, All Rights Reserved

Version 4.1d



## TWO-WAY STOP CONTROL SUMMARY

General Information		Site Information	
Analyst	Kellyjean Tandoc	Intersection	Highway 6/White Mountain
Agency/Co.	LSA Associates, Inc.	Jurisdiction	
Date Performed	3/26/04	Analysis Year	Existing
Analysis Time Period	AM Peak Hour		
Project Description Highway 6 Project			
East/West Street: White Mountain Estates Rd		North/South Street: Highway 6	
Intersection Orientation: North-South		Study Period (hrs): 0.25	

## Vehicle Volumes and Adjustments

Major Street	Northbound			Southbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume		55	4	1	130	
Peak-Hour Factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Hourly Flow Rate, HFR	0	55	4	1	130	0
Percent Heavy Vehicles	0	--	--	0	--	--
Median Type	Undivided					
RT Channelized			0			0
Lanes	0	1	0	0	1	0
Configuration			TR	LT		
Upstream Signal		0			0	
Minor Street	Westbound			Eastbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume	27	0	5	0	0	0
Peak-Hour Factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Hourly Flow Rate, HFR	27	0	5	0	0	0
Percent Heavy Vehicles	0	0	0	0	0	0
Percent Grade (%)	0			0		
Flared Approach		N			N	
Storage		0			0	
RT Channelized			0			0
Lanes	1	0	1	0	0	0
Configuration	L		R			

## Delay, Queue Length, and Level of Service

Approach	NB	SB	Westbound			Eastbound		
Movement	1	4	7	8	9	10	11	12
Lane Configuration		LT	L		R			
v (vph)		1	27		5			
C (m) (vph)		1558	804		1015			
v/c		0.00	0.03		0.00			
95% queue length		0.00	0.10		0.01			
Control Delay		7.3	9.6		8.6			
LOS		A	A		A			
Approach Delay	--	--	9.5					
Approach LOS	--	--	A					

Rights Reserved

HCS2000™

Version 4.1d

Copyright © 2003 University of Florida, All Rights Reserved

Version 4.1d

## TWO-WAY STOP CONTROL SUMMARY

General Information				Site Information				
Analyst	Kellyjean Tandoc			Intersection	Highway 6/White Mountain			
Agency/Co.	LSA Associates, Inc.			Jurisdiction				
Date Performed	3/26/04			Analysis Year	Existing			
Analysis Time Period	PM Peak Hour							
Project Description Highway 6 Project								
East/West Street: White Mountain Estates Rd				North/South Street: Highway 6				
Intersection Orientation: North-South				Study Period (hrs): 0.25				
<b>Vehicle Volumes and Adjustments</b>								
<b>Major Street</b>	Northbound			Southbound				
Movement	1	2	3	4	5	6		
	L	T	R	L	T	R		
Volume		96	17	3	48			
Peak-Hour Factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00		
Hourly Flow Rate, HFR	0	96	17	3	48	0		
Percent Heavy Vehicles	0	--	--	0	--	--		
Median Type	Undivided							
RT Channelized			0			0		
Lanes	0	1	0	0	1	0		
Configuration			TR	LT				
Upstream Signal		0			0			
<b>Minor Street</b>	Westbound			Eastbound				
Movement	7	8	9	10	11	12		
	L	T	R	L	T	R		
Volume	5	0	1	0	0	0		
Peak-Hour Factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00		
Hourly Flow Rate, HFR	5	0	1	0	0	0		
Percent Heavy Vehicles	0	0	0	0	0	0		
Percent Grade (%)	0			0				
Flared Approach		N			N			
Storage		0			0			
RT Channelized			0			0		
Lanes	1	0	1	0	0	0		
Configuration	L		R					
<b>Delay, Queue Length, and Level of Service</b>								
Approach	NB	SB	Westbound			Eastbound		
Movement	1	4	7	8	9	10	11	12
Lane Configuration		LT	L		R			
v (vph)		3	5		1			
C (m) (vph)		1489	836		956			
v/c		0.00	0.01		0.00			
95% queue length		0.01	0.02		0.00			
Control Delay		7.4	9.3		8.8			
LOS		A	A		A			
Approach Delay	--	--	9.2					
Approach LOS	--	--	A					

Rights Reserved

HCS2000™

Version 4.1d

Copyright © 2003 University of Florida, All Rights Reserved

Version 4.1d

## TWO-WAY STOP CONTROL SUMMARY

General Information		Site Information	
Analyst	Kellyjean Tandoc	Intersection	Highway 6/Chalfant Rd
Agency/Co.	LSA Associates, Inc.	Jurisdiction	
Date Performed	3/26/04	Analysis Year	Short Range - Year 2009
Analysis Time Period	AM Peak Hour		
Project Description Highway 6			
East/West Street: Chalfant Rd		North/South Street: Chalfant	
Intersection Orientation: North-South		Study Period (hrs): 0.25	

## Vehicle Volumes and Adjustments

Major Street	Northbound			Southbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume	10	65	0	0	117	2
Peak-Hour Factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Hourly Flow Rate, HFR	10	65	0	0	117	2
Percent Heavy Vehicles	0	--	--	0	--	--
Median Type	Undivided					
RT Channelized			0			0
Lanes	0	1	0	0	1	0
Configuration	LT					TR
Upstream Signal		0			0	
Minor Street	Westbound			Eastbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume		0		11	0	70
Peak-Hour Factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Hourly Flow Rate, HFR	0	0	0	11	0	70
Percent Heavy Vehicles	0	0	0	0	0	0
Percent Grade (%)		0			0	
Flared Approach		N			N	
Storage		0			0	
RT Channelized			0			0
Lanes	0	0	0	1	0	1
Configuration				L		R

## Delay, Queue Length, and Level of Service

Approach	NB	SB	Westbound			Eastbound		
Movement	1	4	7	8	9	10	11	12
Lane Configuration	LT					L		R
v (vph)	10					11		70
C (m) (vph)	1482					785		939
v/c	0.01					0.01		0.07
95% queue length	0.02					0.04		0.24
Control Delay	7.4					9.7		9.1
LOS	A					A		A
Approach Delay	--	--				9.2		
Approach LOS	--	--				A		

Rights Reserved

HCS2000™

Version 4.1d

Copyright © 2003 University of Florida, All Rights Reserved

Version 4.1d

## TWO-WAY STOP CONTROL SUMMARY

General Information		Site Information	
Analyst	Kellyjean Tandoc	Intersection	Highway 6/Chalfant Rd
Agency/Co.	LSA Associates, Inc.	Jurisdiction	
Date Performed	3/26/04	Analysis Year	Short Range - Year 2009
Analysis Time Period	PM Peak Hour		
Project Description Highway 6 Project			
East/West Street: Chalfant Rd		North/South Street: Highway 6	
Intersection Orientation: North-South		Study Period (hrs): 0.25	

## Vehicle Volumes and Adjustments

Major Street	Northbound			Southbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume	47	88	0	0	56	12
Peak-Hour Factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Hourly Flow Rate, HFR	47	88	0	0	56	12
Percent Heavy Vehicles	0	--	--	0	--	--
Median Type	Undivided					
RT Channelized			0			0
Lanes	0	1	0	0	1	0
Configuration	LT					TR
Upstream Signal		0			0	
Minor Street	Westbound			Eastbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume	0	0	0	4	0	10
Peak-Hour Factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Hourly Flow Rate, HFR	0	0	0	4	0	10
Percent Heavy Vehicles	0	0	0	0	0	0
Percent Grade (%)	0			0		
Flared Approach		N			N	
Storage		0			0	
RT Channelized			0			0
Lanes	0	0	0	1	0	1
Configuration				L		R

## Delay, Queue Length, and Level of Service

Approach	NB	SB	Westbound			Eastbound		
Movement	1	4	7	8	9	10	11	12
Lane Configuration	LT					L		R
v (vph)	47					4		10
C (m) (vph)	1546					726		1009
v/c	0.03					0.01		0.01
95% queue length	0.09					0.02		0.03
Control Delay	7.4					10.0		8.6
LOS	A					A		A
Approach Delay	--	--				9.0		
Approach LOS	--	--				A		

Rights Reserved

HCS2000™

Version 4.1d

Copyright © 2003 University of Florida, All Rights Reserved

Version 4.1d

## TWO-WAY STOP CONTROL SUMMARY

## General Information

Analyst *Kellyjean Tandoc*  
 Agency/Co. *LSA Associates, Inc.*  
 Date Performed *3/26/04*  
 Analysis Time Period *AM Peak Hour*

## Site Information

Intersection *Highway 6/White Mountain*  
 Jurisdiction  
 Analysis Year *Short Range - Year 2009*

Project Description *Highway 6 Project*

East/West Street: *White Mountain Estates Rd*

North/South Street: *Highway 6*

Intersection Orientation: *North-South*

Study Period (hrs): *0.25*

## Vehicle Volumes and Adjustments

Major Street	Northbound			Southbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume		70	4	1	186	
Peak-Hour Factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Hourly Flow Rate, HFR	0	70	4	1	186	0
Percent Heavy Vehicles	0	--	--	0	--	--
Median Type	Undivided					
RT Channelized			0			0
Lanes	0	1	0	0	1	0
Configuration			TR	LT		
Upstream Signal		0			0	

Minor Street	Westbound			Eastbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume	27	0	5	0	0	0
Peak-Hour Factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Hourly Flow Rate, HFR	27	0	5	0	0	0
Percent Heavy Vehicles	0	0	0	0	0	0
Percent Grade (%)	0			0		
Flared Approach		N			N	
Storage		0			0	
RT Channelized			0			0
Lanes	1	0	1	0	0	0
Configuration	L		R			

## Delay, Queue Length, and Level of Service

Approach	NB	SB	Westbound			Eastbound		
Movement	1	4	7	8	9	10	11	12
Lane Configuration		LT	L		R			
v (vph)		1	27		5			
C (m) (vph)		1538	733		996			
v/c		0.00	0.04		0.01			
95% queue length		0.00	0.11		0.02			
Control Delay		7.3	10.1		8.6			
LOS		A	B		A			
Approach Delay	--	--	9.9					
Approach LOS	--	--	A					

Rights Reserved

HCS2000™

Version 4.1d

Copyright © 2003 University of Florida, All Rights Reserved

Version 4.1d

## TWO-WAY STOP CONTROL SUMMARY

General Information		Site Information	
Analyst	Kellyjean Tandoc	Intersection	Highway 6/White Mountain
Agency/Co.	LSA Associates, Inc.	Jurisdiction	
Date Performed	3/26/04	Analysis Year	Short Range - Year 2009
Analysis Time Period	PM Peak Hour		
Project Description Highway 6 Project			
East/West Street: White Mountain Estates Rd		North/South Street: Highway 6	
Intersection Orientation: North-South		Study Period (hrs): 0.25	

## Vehicle Volumes and Adjustments

Major Street	Northbound			Southbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume		134	17	3	63	
Peak-Hour Factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Hourly Flow Rate, HFR	0	134	17	3	63	0
Percent Heavy Vehicles	0	--	--	0	--	--
Median Type	Undivided					
RT Channelized			0			0
Lanes	0	1	0	0	1	0
Configuration			TR	LT		
Upstream Signal		0			0	

Minor Street	Westbound			Eastbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume	- 5	0	1	0	0	0
Peak-Hour Factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Hourly Flow Rate, HFR	5	0	1	0	0	0
Percent Heavy Vehicles	0	0	0	0	0	0
Percent Grade (%)	0			0		
Flared Approach		N			N	
Storage		0			0	
RT Channelized			0			0
Lanes	1	0	1	0	0	0
Configuration	L		R			

## Delay, Queue Length, and Level of Service

Approach	NB	SB	Westbound			Eastbound		
Movement	1	4	7	8	9	10	11	12
Lane Configuration		LT	L		R			
v (vph)		3	5		1			
C (m) (vph)		1442	780		911			
v/c		0.00	0.01		0.00			
95% queue length		0.01	0.02		0.00			
Control Delay		7.5	9.6		9.0			
LOS		A	A		A			
Approach Delay	--	--	9.5					
Approach LOS	--	--	A					

Rights Reserved

HCS2000™

Version 4.1d

Copyright © 2003 University of Florida, All Rights Reserved

Version 4.1d

## TWO-WAY STOP CONTROL SUMMARY

General Information				Site Information				
Analyst	Kellyjean Tandoc			Intersection	Highway 6/Chalfant Rd			
Agency/Co.	LSA Associates, Inc.			Jurisdiction				
Date Performed	3/26/04			Analysis Year	Long Range - Year 2025			
Analysis Time Period	AM Peak Hour							
Project Description Highway 6								
East/West Street: Chalfant Rd				North/South Street: Chalfant				
Intersection Orientation: North-South				Study Period (hrs): 0.25				
<b>Vehicle Volumes and Adjustments</b>								
<b>Major Street</b>	Northbound			Southbound				
Movement	1	2	3	4	5	6		
	L	T	R	L	T	R		
Volume	10	104	0	0	188	2		
Peak-Hour Factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00		
Hourly Flow Rate, HFR	10	104	0	0	188	2		
Percent Heavy Vehicles	0	--	--	0	--	--		
Median Type	Undivided							
RT Channelized			0			0		
Lanes	0	1	0	0	1	0		
Configuration	LT					TR		
Upstream Signal		0			0			
<b>Minor Street</b>	Westbound			Eastbound				
Movement	7	8	9	10	11	12		
	L	T	R	L	T	R		
Volume		0		11	0	70		
Peak-Hour Factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00		
Hourly Flow Rate, HFR	0	0	0	11	0	70		
Percent Heavy Vehicles	0	0	0	0	0	0		
Percent Grade (%)	0			0				
Flared Approach		N			N			
Storage		0			0			
RT Channelized			0			0		
Lanes	0	0	0	1	0	1		
Configuration				L		R		
<b>Delay, Queue Length, and Level of Service</b>								
Approach	NB	SB	Westbound			Eastbound		
Movement	1	4	7	8	9	10	11	12
Lane Configuration	LT					L		R
v (vph)	10					11		70
C (m) (vph)	1396					679		858
v/c	0.01					0.02		0.08
95% queue length	0.02					0.05		0.27
Control Delay	7.6					10.4		9.6
LOS	A					B		A
Approach Delay	--	--				9.7		
Approach LOS	--	--				A		

Rights Reserved

HCS2000™

Version 4.1d

Copyright © 2003 University of Florida, All Rights Reserved

Version 4.1d

## TWO-WAY STOP CONTROL SUMMARY

## General Information

Analyst *Kellyjean Tandoc*  
 Agency/Co. *LSA Associates, Inc.*  
 Date Performed *3/26/04*  
 Analysis Time Period *PM Peak Hour*

## Site Information

Intersection *Highway 6/Chalfant Rd*  
 Jurisdiction  
 Analysis Year *Long Range - Year 2025*

Project Description *Highway 6 Project*

East/West Street: *Chalfant Rd*

North/South Street: *Highway 6*

Intersection Orientation: *North-South*

Study Period (hrs): *0.25*

## Vehicle Volumes and Adjustments

Major Street	Northbound			Southbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume	47	141	0	0	89	12
Peak-Hour Factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Hourly Flow Rate, HFR	47	141	0	0	89	12
Percent Heavy Vehicles	0	—	—	0	—	—
Median Type	Undivided					
RT Channelized			0			0
Lanes	0	1	0	0	1	0
Configuration	LT					TR
Upstream Signal		0			0	

Minor Street	Westbound			Eastbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume	0	0	0	4	0	10
Peak-Hour Factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Hourly Flow Rate, HFR	0	0	0	4	0	10
Percent Heavy Vehicles	0	0	0	0	0	0
Percent Grade (%)	0			0		
Flared Approach		N			N	
Storage		0			0	
RT Channelized			0			0
Lanes	0	0	0	1	0	1
Configuration				L		R

## Delay, Queue Length, and Level of Service

Approach	NB	SB	Westbound			Eastbound		
Movement	1	4	7	8	9	10	11	12
Lane Configuration	LT					L		R
v (vph)	47					4		10
C (m) (vph)	1504					648		967
v/c	0.03					0.01		0.01
95% queue length	0.10					0.02		0.03
Control Delay	7.5					10.6		8.8
LOS	A					B		A
Approach Delay	--	--				9.3		
Approach LOS	--	--				A		

Rights Reserved

HCS2000™

Version 4.1d

Copyright © 2003 University of Florida, All Rights Reserved

Version 4.1d



## TWO-WAY STOP CONTROL SUMMARY

General Information			Site Information	
Analyst	Kellyjean Tandoc		Intersection	Highway 6/White Mountain
Agency/Co.	LSA Associates, Inc.		Jurisdiction	
Date Performed	3/26/04		Analysis Year	Long Range - Year 2025
Analysis Time Period	AM Peak Hour			
Project Description	Highway 6 Project			
East/West Street:	White Mountain Estates Rd		North/South Street:	Highway 6
Intersection Orientation:	North-South		Study Period (hrs):	0.25

## Vehicle Volumes and Adjustments

Major Street	Northbound			Southbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume		109	4	1	257	
Peak-Hour Factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Hourly Flow Rate, HFR	0	109	4	1	257	0
Percent Heavy Vehicles	0	--	--	0	--	--
Median Type	Undivided					
RT Channelized			0			0
Lanes	0	1	0	0	1	0
Configuration			TR	LT		
Upstream Signal		0			0	

Minor Street	Westbound			Eastbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume	27	0	5	0	0	0
Peak-Hour Factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Hourly Flow Rate, HFR	27	0	5	0	0	0
Percent Heavy Vehicles	0	0	0	0	0	0
Percent Grade (%)	0			0		
Flared Approach		N			N	
Storage		0			0	
RT Channelized			0			0
Lanes	1	0	1	0	0	0
Configuration	L		R			

## Delay, Queue Length, and Level of Service

Approach	NB	SB	Westbound			Eastbound		
Movement	1	4	7	8	9	10	11	12
Lane Configuration		LT	L		R			
v (vph)		1	27		5			
C (m) (vph)		1489	634		948			
v/c		0.00	0.04		0.01			
95% queue length		0.00	0.13		0.02			
Control Delay		7.4	10.9		8.8			
LOS		A	B		A			
Approach Delay	--	--	10.6					
Approach LOS	--	--	B					

Rights Reserved

HCS2000™

Version 4.1d

Copyright © 2003 University of Florida, All Rights Reserved

Version 4.1d

## TWO-WAY STOP CONTROL SUMMARY

General Information		Site Information	
Analyst	Kellyjean Tandoc	Intersection	Highway 6/White Mountain
Agency/Co.	LSA Associates, Inc.	Jurisdiction	
Date Performed	3/26/04	Analysis Year	Long Range - Year 2025
Analysis Time Period	PM Peak Hour		
Project Description Highway 6 Project			
East/West Street: White Mountain Estates Rd		North/South Street: Highway 6	
Intersection Orientation: North-South		Study Period (hrs): 0.25	

### Vehicle Volumes and Adjustments

Major Street	Northbound			Southbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume		187	17	3	96	
Peak-Hour Factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Hourly Flow Rate, HFR	0	187	17	3	96	0
Percent Heavy Vehicles	0	--	--	0	--	--
Median Type	Undivided					
RT Channelized			0			0
Lanes	0	1	0	0	1	0
Configuration			TR	LT		
Upstream Signal		0			0	

Minor Street	Westbound			Eastbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume	5	0	1	0	0	0
Peak-Hour Factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Hourly Flow Rate, HFR	5	0	1	0	0	0
Percent Heavy Vehicles	0	0	0	0	0	0
Percent Grade (%)	0			0		
Flared Approach		N			N	
Storage		0			0	
RT Channelized			0			0
Lanes	1	0	1	0	0	0
Configuration	L		R			

### Delay, Queue Length, and Level of Service

Approach	NB	SB	Westbound			Eastbound		
Movement	1	4	7	8	9	10	11	12
Lane Configuration		LT	L		R			
v (vph)		3	5		1			
C (m) (vph)		1380	696		850			
v/c		0.00	0.01		0.00			
95% queue length		0.01	0.02		0.00			
Control Delay		7.6	10.2		9.2			
LOS		A	B		A			
Approach Delay	--	--	10.0					
Approach LOS	--	--	B					

Rights Reserved

HCS2000™

Version 4.1d

Copyright © 2003 University of Florida, All Rights Reserved

Version 4.1d

## TWO-WAY STOP CONTROL SUMMARY

## General Information

Analyst *Kellyjean Tandoc*  
 Agency/Co. *LSA Associates, Inc.*  
 Date Performed *3/26/04*  
 Analysis Time Period *AM Peak Hour*

## Site Information

Intersection *Highway 6/Chalfant Rd*  
 Jurisdiction  
 Analysis Year *Existing Plus Project*

Project Description *Highway 6*

East/West Street: *Chalfant Rd*

North/South Street: *Chalfant*

Intersection Orientation: *North-South*

Study Period (hrs): *0.25*

## Vehicle Volumes and Adjustments

Major Street	Northbound			Southbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume	26	54	0	0	108	5
Peak-Hour Factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Hourly Flow Rate, HFR	26	54	0	0	108	5
Percent Heavy Vehicles	0	--	--	0	--	--
Median Type	Undivided					
RT Channelized			0			0
Lanes	0	1	0	0	1	0
Configuration	LT					TR
Upstream Signal		0			0	
Minor Street	Westbound			Eastbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume		0		17	0	59
Peak-Hour Factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Hourly Flow Rate, HFR	0	0	0	17	0	59
Percent Heavy Vehicles	0	0	0	0	0	0
Percent Grade (%)	0			0		
Flared Approach		N			N	
Storage		0			0	
RT Channelized			0			0
Lanes	0	0	0	1	0	1
Configuration				L		R

## Delay, Queue Length, and Level of Service

Approach	NB	SB	Westbound			Eastbound		
Movement	1	4	7	8	9	10	11	12
Lane Configuration	LT					L		R
v (vph)	26					17		59
C (m) (vph)	1489					763		949
v/c	0.02					0.02		0.06
95% queue length	0.05					0.07		0.20
Control Delay	7.5					9.8		9.0
LOS	A					A		A
Approach Delay	--	--				9.2		
Approach LOS	--	--				A		

Rights Reserved

HCS2000™

Version 4.1d

Copyright © 2003 University of Florida, All Rights Reserved

Version 4.1d

## TWO-WAY STOP CONTROL SUMMARY

General Information		Site Information	
Analyst	Kellyjean Tandoc	Intersection	Highway 6/Chalfant Rd
Agency/Co.	LSA Associates, Inc.	Jurisdiction	
Date Performed	3/26/04	Analysis Year	Existing Plus Project
Analysis Time Period	PM Peak Hour		
Project Description Highway 6 Project			
East/West Street: Chalfant Rd		North/South Street: Highway 6	
Intersection Orientation: North-South		Study Period (hrs): 0.25	

## Vehicle Volumes and Adjustments

Major Street	Northbound			Southbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume	86	52	0	0	50	11
Peak-Hour Factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Hourly Flow Rate, HFR	86	52	0	0	50	11
Percent Heavy Vehicles	0	--	--	0	--	--
Median Type	Undivided					
RT Channelized			0			0
Lanes	0	1	0	0	1	0
Configuration	LT					TR
Upstream Signal		0			0	

Minor Street	Westbound			Eastbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume	0	0	0	35	0	34
Peak-Hour Factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Hourly Flow Rate, HFR	0	0	0	35	0	34
Percent Heavy Vehicles	0	0	0	0	0	0
Percent Grade (%)	0			0		
Flared Approach		N			N	
Storage		0			0	
RT Channelized			0			0
Lanes	0	0	0	1	0	1
Configuration				L		R

Delay, Queue Length, and Level of Service								
Approach	NB	SB	Westbound			Eastbound		
Movement	1	4	7	8	9	10	11	12
Lane Configuration	LT					L		R
v (vph)	86					35		34
C (m) (vph)	1555					675		1016
v/c	0.06					0.05		0.03
95% queue length	0.18					0.16		0.10
Control Delay	7.5					10.6		8.7
LOS	A					B		A
Approach Delay	--	--				9.7		
Approach LOS	--	--				A		

Rights Reserved

HCS2000™

Version 4.1d

Copyright © 2003 University of Florida, All Rights Reserved

Version 4.1d

## TWO-WAY STOP CONTROL SUMMARY

General Information		Site Information	
Analyst	Kellyjean Tandoc	Intersection	Highway 6/White Mountain
Agency/Co.	LSA Associates, Inc.	Jurisdiction	
Date Performed	3/26/04	Analysis Year	Existing Plus Project
Analysis Time Period	AM Peak Hour		
Project Description Highway 6 Project			
East/West Street: White Mountain Estates Rd		North/South Street: Highway 6	
Intersection Orientation: North-South		Study Period (hrs): 0.25	

## Vehicle Volumes and Adjustments

Major Street	Northbound			Southbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume		68	10	2	166	
Peak-Hour Factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Hourly Flow Rate, HFR	0	68	10	2	166	0
Percent Heavy Vehicles	0	--	--	0	--	--
Median Type	Undivided					
RT Channelized			0			0
Lanes	0	1	0	0	1	0
Configuration			TR	LT		
Upstream Signal		0			0	

Minor Street	Westbound			Eastbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume	65	0	12	0	0	0
Peak-Hour Factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Hourly Flow Rate, HFR	65	0	12	0	0	0
Percent Heavy Vehicles	0	0	0	0	0	0
Percent Grade (%)	0			0		
Flared Approach		N			N	
Storage		0			0	
RT Channelized			0			0
Lanes	1	0	1	0	0	0
Configuration	L		R			

## Delay, Queue Length, and Level of Service

Approach	NB	SB	Westbound			Eastbound		
Movement	1	4	7	8	9	10	11	12
Lane Configuration		LT	L		R			
v (vph)		2	65		12			
C (m) (vph)		1533	749		995			
v/c		0.00	0.09		0.01			
95% queue length		0.00	0.28		0.04			
Control Delay		7.4	10.3		8.7			
LOS		A	B		A			
Approach Delay	--	--	10.0					
Approach LOS	--	--	B					

Rights Reserved

HCS2000™

Version 4.1d

Copyright © 2003 University of Florida, All Rights Reserved

Version 4.1d

## TWO-WAY STOP CONTROL SUMMARY

General Information		Site Information	
Analyst	Kellyjean Tandoc	Intersection	Highway 6/White Mountain
Agency/Co.	LSA Associates, Inc.	Jurisdiction	
Date Performed	3/26/04	Analysis Year	Existing Plus Project
Analysis Time Period	PM Peak Hour		
Project Description Highway 6 Project			
East/West Street: White Mountain Estates Rd		North/South Street: Highway 6	
Intersection Orientation: North-South		Study Period (hrs): 0.25	

## Vehicle Volumes and Adjustments

Major Street	Northbound			Southbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume		136	42	7	76	
Peak-Hour Factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Hourly Flow Rate, HFR	0	136	42	7	76	0
Percent Heavy Vehicles	0	--	--	0	--	--
Median Type	Undivided					
RT Channelized			0			0
Lanes	0	1	0	0	1	0
Configuration			TR	LT		
Upstream Signal		0			0	

Minor Street	Westbound			Eastbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume	12	0	2	0	0	0
Peak-Hour Factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Hourly Flow Rate, HFR	12	0	2	0	0	0
Percent Heavy Vehicles	0	0	0	0	0	0
Percent Grade (%)	0			0		
Flared Approach		N			N	
Storage		0			0	
RT Channelized			0			0
Lanes	1	0	1	0	0	0
Configuration	L		R			

## Delay, Queue Length, and Level of Service

Approach	NB	SB	Westbound			Eastbound		
Movement	1	4	7	8	9	10	11	12
Lane Configuration		LT	L		R			
v (vph)		7	12		2			
C (m) (vph)		1410	742		894			
v/c		0.00	0.02		0.00			
95% queue length		0.01	0.05		0.01			
Control Delay		7.6	9.9		9.0			
LOS		A	A		A			
Approach Delay	--	--	9.8					
Approach LOS	--	--	A					

Rights Reserved

HCS2000™

Version 4.1d

Copyright © 2003 University of Florida, All Rights Reserved

Version 4.1d

## TWO-WAY STOP CONTROL SUMMARY

## General Information

Analyst *Kellyjean Tandoc*  
 Agency/Co. *LSA Associates, Inc.*  
 Date Performed *3/26/04*  
 Analysis Time Period *AM Peak Hour*

## Site Information

Intersection *Highway 6/Chalfant Rd*  
 Jurisdiction  
 Analysis Year *Short Range(2009) Plus Project*

Project Description *Highway 6*

East/West Street: *Chalfant Rd*

North/South Street: *Chalfant*

Intersection Orientation: *North-South*

Study Period (hrs): *0.25*

## Vehicle Volumes and Adjustments

Major Street	Northbound			Southbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume	32	63	0	0	124	6
Peak-Hour Factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Hourly Flow Rate, HFR	32	63	0	0	124	6
Percent Heavy Vehicles	0	--	--	0	--	--
Median Type	Undivided					
RT Channelized			0			0
Lanes	0	1	0	0	1	0
Configuration	LT					TR
Upstream Signal		0			0	
Minor Street	Westbound			Eastbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume		0		24	0	99
Peak-Hour Factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Hourly Flow Rate, HFR	0	0	0	24	0	99
Percent Heavy Vehicles	0	0	0	0	0	0
Percent Grade (%)		0			0	
Flared Approach		N			N	
Storage		0			0	
RT Channelized			0			0
Lanes	0	0	0	1	0	1
Configuration				L		R

## Delay, Queue Length, and Level of Service

Approach	NB	SB	Westbound			Eastbound		
Movement	1	4	7	8	9	10	11	12
Lane Configuration	LT					L		R
v (vph)	32					24		99
C (m) (vph)	1468					723		929
v/c	0.02					0.03		0.11
95% queue length	0.07					0.10		0.36
Control Delay	7.5					10.2		9.3
LOS	A					B		A
Approach Delay	--	--				9.5		
Approach LOS	--	--				A		

Rights Reserved

HCS2000™

Version 4.1d

Copyright © 2003 University of Florida, All Rights Reserved

Version 4.1d

## TWO-WAY STOP CONTROL SUMMARY

General Information		Site Information	
Analyst	Kellyjean Tandoc	Intersection	Highway 6/Chalfant Rd
Agency/Co.	LSA Associates, Inc.	Jurisdiction	
Date Performed	3/26/04	Analysis Year	Short Range(2009) Plus Project
Analysis Time Period	PM Peak Hour		
Project Description Highway 6 Project			
East/West Street: Chalfant Rd		North/South Street: Highway 6	
Intersection Orientation: North-South		Study Period (hrs): 0.25	

### Vehicle Volumes and Adjustments

Major Street	Northbound			Southbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume	112	64	0	0	58	22
Peak-Hour Factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Hourly Flow Rate, HFR	112	64	0	0	58	22
Percent Heavy Vehicles	0	--	--	0	--	--
Median Type	Undivided					
RT Channelized			0			0
Lanes	0	1	0	0	1	0
Configuration	LT					TR
Upstream Signal		0			0	

Minor Street	Westbound			Eastbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume	0	0	0	36	0	41
Peak-Hour Factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Hourly Flow Rate, HFR	0	0	0	36	0	41
Percent Heavy Vehicles	0	0	0	0	0	0
Percent Grade (%)	0			0		
Flared Approach		N			N	
Storage		0			0	
RT Channelized			0			0
Lanes	0	0	0	1	0	1
Configuration				L		R

### Delay, Queue Length, and Level of Service

Approach	NB	SB	Westbound			Eastbound		
Movement	1	4	7	8	9	10	11	12
Lane Configuration	LT					L		R
v (vph)	112					36		41
C (m) (vph)	1531					598		1000
v/c	0.07					0.06		0.04
95% queue length	0.24					0.19		0.13
Control Delay	7.5					11.4		8.8
LOS	A					B		A
Approach Delay	--	--				10.0		
Approach LOS	--	--				A		

Rights Reserved

HCS2000™

Version 4.1d

Copyright © 2003 University of Florida, All Rights Reserved

Version 4.1d



## TWO-WAY STOP CONTROL SUMMARY

General Information		Site Information	
Analyst	Kellyjean Tandoc	Intersection	Highway 6/White Mountain
Agency/Co.	LSA Associates, Inc.	Jurisdiction	
Date Performed	3/26/04	Analysis Year	Short Range(2009) Plus Project
Analysis Time Period	AM Peak Hour		
Project Description Highway 6 Project			
East/West Street: White Mountain Estates Rd		North/South Street: Highway 6	
Intersection Orientation: North-South		Study Period (hrs): 0.25	

## Vehicle Volumes and Adjustments

Major Street	Northbound			Southbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume		83	10	2	222	
Peak-Hour Factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Hourly Flow Rate, HFR	0	83	10	2	222	0
Percent Heavy Vehicles	0	--	--	0	--	--
Median Type	Undivided					
RT Channelized			0			0
Lanes	0	1	0	0	1	0
Configuration			TR	LT		
Upstream Signal		0			0	
Minor Street	Westbound			Eastbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume	65	0	12	0	0	0
Peak-Hour Factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Hourly Flow Rate, HFR	65	0	12	0	0	0
Percent Heavy Vehicles	0	0	0	0	0	0
Percent Grade (%)	0			0		
Flared Approach		N			N	
Storage		0			0	
RT Channelized			0			0
Lanes	1	0	1	0	0	0
Configuration	L		R			

## Delay, Queue Length, and Level of Service

Approach	NB	SB	Westbound			Eastbound		
Movement	1	4	7	8	9	10	11	12
Lane Configuration		LT	L		R			
v (vph)		2	65		12			
C (m) (vph)		1514	682		976			
v/c		0.00	0.10		0.01			
95% queue length		0.00	0.31		0.04			
Control Delay		7.4	10.8		8.7			
LOS		A	B		A			
Approach Delay	--	--	10.5					
Approach LOS	--	--	B					

Rights Reserved

HCS2000™

Version 4.1d

Copyright © 2003 University of Florida, All Rights Reserved

Version 4.1d

## TWO-WAY STOP CONTROL SUMMARY

General Information		Site Information	
Analyst	Kellyjean Tandoc	Intersection	Highway 6/White Mountain
Agency/Co.	LSA Associates, Inc.	Jurisdiction	
Date Performed	3/26/04	Analysis Year	Short Range(2009) Plus Project
Analysis Time Period	PM Peak Hour		
Project Description Highway 6 Project			
East/West Street: White Mountain Estates Rd		North/South Street: Highway 6	
Intersection Orientation: North-South		Study Period (hrs): 0.25	

## Vehicle Volumes and Adjustments

Major Street	Northbound			Southbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume		174	42	7	91	
Peak-Hour Factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Hourly Flow Rate, HFR	0	174	42	7	91	0
Percent Heavy Vehicles	0	—	—	0	—	—
Median Type	Undivided					
RT Channelized			0			0
Lanes	0	1	0	0	1	0
Configuration			TR	LT		
Upstream Signal		0			0	

Minor Street	Westbound			Eastbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume	12	0	2	0	0	0
Peak-Hour Factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Hourly Flow Rate, HFR	12	0	2	0	0	0
Percent Heavy Vehicles	0	0	0	0	0	0
Percent Grade (%)	0			0		
Flared Approach		N			N	
Storage		0			0	
RT Channelized			0			0
Lanes	1	0	1	0	0	0
Configuration	L		R			

## Delay, Queue Length, and Level of Service

Approach	NB	SB	Westbound			Eastbound		
Movement	1	4	7	8	9	10	11	12
Lane Configuration		LT	L		R			
v (vph)		7	12		2			
C (m) (vph)		1366	692		851			
v/c		0.01	0.02		0.00			
95% queue length		0.02	0.05		0.01			
Control Delay		7.6	10.3		9.2			
LOS		A	B		A			
Approach Delay	--	--	10.1					
Approach LOS	--	--	B					

Rights Reserved

HCS2000™

Version 4.1d

Copyright © 2003 University of Florida, All Rights Reserved

Version 4.1d

## TWO-WAY STOP CONTROL SUMMARY

## General Information

Analyst *Kellyjean Tandoc*  
 Agency/Co. *LSA Associates, Inc.*  
 Date Performed *3/26/04*  
 Analysis Time Period *PM Peak Hour*

## Site Information

Intersection *Highway 6/Chalfant Rd*  
 Jurisdiction  
 Analysis Year *Long Range(2025) Plus Project*

Project Description *Highway 6 Project*

East/West Street: *Chalfant Rd*

North/South Street: *Highway 6*

Intersection Orientation: *North-South*

Study Period (hrs): *0.25*

## Vehicle Volumes and Adjustments

Major Street	Northbound			Southbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume	112	117	0	0	91	22
Peak-Hour Factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Hourly Flow Rate, HFR	112	117	0	0	91	22
Percent Heavy Vehicles	0	--	--	0	--	--
Median Type	Undivided					
RT Channelized			0			0
Lanes	0	1	0	0	1	0
Configuration	LT					TR
Upstream Signal		0			0	
Minor Street	Westbound			Eastbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume	0	0	0	36	0	41
Peak-Hour Factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Hourly Flow Rate, HFR	0	0	0	36	0	41
Percent Heavy Vehicles	0	0	0	0	0	0
Percent Grade (%)	0			0		
Flared Approach		N			N	
Storage		0			0	
RT Channelized			0			0
Lanes	0	0	0	1	0	1
Configuration				L		R

## Delay, Queue Length, and Level of Service

Approach	NB	SB	Westbound			Eastbound		
Movement	1	4	7	8	9	10	11	12
Lane Configuration	LT					L		R
v (vph)	112					36		41
C (m) (vph)	1489					533		959
v/c	0.08					0.07		0.04
95% queue length	0.24					0.22		0.13
Control Delay	7.6					12.2		8.9
LOS	A					B		A
Approach Delay	--	--				10.5		
Approach LOS	--	--				B		

Rights Reserved

HCS2000™

Version 4.1d

Copyright © 2003 University of Florida, All Rights Reserved

Version 4.1d

## TWO-WAY STOP CONTROL SUMMARY

General Information		Site Information	
Analyst	Kellyjean Tandoc	Intersection	Highway 6/White Mountain
Agency/Co.	LSA Associates, Inc.	Jurisdiction	
Date Performed	3/26/04	Analysis Year	Long Range(2025) Plus
Analysis Time Period	AM Peak Hour		Project
Project Description Highway 6 Project			
East/West Street: White Mountain Estates Rd		North/South Street: Highway 6	
Intersection Orientation: North-South		Study Period (hrs): 0.25	

## Vehicle Volumes and Adjustments

Major Street	Northbound			Southbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume		122	10	2	293	
Peak-Hour Factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Hourly Flow Rate, HFR	0	122	10	2	293	0
Percent Heavy Vehicles	0	--	--	0	--	--
Median Type	Undivided					
RT Channelized			0			0
Lanes	0	1	0	0	1	0
Configuration			TR	LT		
Upstream Signal		0			0	
Minor Street	Westbound			Eastbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume	65	0	12	0	0	0
Peak-Hour Factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Hourly Flow Rate, HFR	65	0	12	0	0	0
Percent Heavy Vehicles	0	0	0	0	0	0
Percent Grade (%)	0			0		
Flared Approach		N			N	
Storage		0			0	
RT Channelized			0			0
Lanes	1	0	1	0	0	0
Configuration	L		R			

## Delay, Queue Length, and Level of Service

Approach	NB	SB	Westbound			Eastbound		
Movement	1	4	7	8	9	10	11	12
Lane Configuration		LT	L		R			
v (vph)		2	65		12			
C (m) (vph)		1466	590		929			
v/c		0.00	0.11		0.01			
95% queue length		0.00	0.37		0.04			
Control Delay		7.5	11.9		8.9			
LOS		A	B		A			
Approach Delay	--	--	11.4					
Approach LOS	--	--	B					

Rights Reserved

HCS2000™

Version 4.1d

Copyright © 2003 University of Florida, All Rights Reserved

Version 4.1d

## TWO-WAY STOP CONTROL SUMMARY

## General Information

Analyst *Kellyjean Tandoc*  
 Agency/Co. *LSA Associates, Inc.*  
 Date Performed *3/26/04*  
 Analysis Time Period *PM Peak Hour*

## Site Information

Intersection *Highway 6/White Mountain*  
 Jurisdiction  
 Analysis Year *Long Range(2025) Plus Project*

Project Description *Highway 6 Project*

East/West Street: *White Mountain Estates Rd*

North/South Street: *Highway 6*

Intersection Orientation: *North-South*

Study Period (hrs): *0.25*

## Vehicle Volumes and Adjustments

Major Street	Northbound			Southbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume		227	42	7	124	
Peak-Hour Factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Hourly Flow Rate, HFR	0	227	42	7	124	0
Percent Heavy Vehicles	0	--	--	0	--	--
Median Type	Undivided					
RT Channelized			0			0
Lanes	0	1	0	0	1	0
Configuration			TR	LT		
Upstream Signal		0			0	
Minor Street	Westbound			Eastbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume	12	0	2	0	0	0
Peak-Hour Factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Hourly Flow Rate, HFR	12	0	2	0	0	0
Percent Heavy Vehicles	0	0	0	0	0	0
Percent Grade (%)	0			0		
Flared Approach		N			N	
Storage		0			0	
RT Channelized			0			0
Lanes	1	0	1	0	0	0
Configuration	L		R			

## Delay, Queue Length, and Level of Service

Approach	NB	SB	Westbound			Eastbound		
Movement	1	4	7	8	9	10	11	12
Lane Configuration		LT	L		R			
v (vph)		7	12		2			
C (m) (vph)		1306	618		796			
v/c		0.01	0.02		0.00			
95% queue length		0.02	0.06		0.01			
Control Delay		7.8	10.9		9.5			
LOS		A	B		A			
Approach Delay	--	--	10.7					
Approach LOS	--	--	B					

Rights Reserved

HCS2000™

Version 4.1d

Copyright © 2003 University of Florida, All Rights Reserved

Version 4.1d